

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (original) A device for separating cells using an antibody selected from a chimera antibody, a single chain antibody or combinations thereof.

2. (currently amended) A device for separating CD4-positive cells, ~~using~~ comprising:

an antibody selected from the group consisting of a chimera antibody, a single chain antibody ~~which~~ and combinations thereof, wherein said antibody binds to CD4 molecules, ~~or combinations thereof~~ and wherein said antibody is bound to a water-insoluble carrier in the form of fiber.

3. (currently amended) A device for separating CD4-positive cells, ~~using~~ comprising a chimera antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 1 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID NO. 2 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 3 in the Sequence Listing, an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 4 in the Sequence

Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 5 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 6 in the Sequence Listing, and an Fc region of a human type, and wherein said chimera antibody is bound to a water-insoluble carrier in the form of fiber.

4. (currently amended) A device for separating CD4-positive cells, ~~using~~ comprising a single chain antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 1 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID NO. 2 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 3 in the Sequence Listing, and an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 4 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 5 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 6 in the Sequence Listing, and wherein said single chain antibody is bound to a water-insoluble carrier in the form of fiber.

5. (original) A device for separating CD34-positive cells using an antibody selected from a chimera antibody, a single chain antibody which binds to CD34 molecules or combinations thereof.

6. (previously presented) A device for separating human CD34-positive cells using a chimera antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 43 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 44 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 45 in the Sequence Listing, an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 46 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 47 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 48 in the Sequence Listing, and an Fc region of a human type.

7. (original) A device for separating human CD34-positive cells using a single chain antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 43 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 44 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 45 in the Sequence Listing, and an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 46 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 47 in the Sequence Listing, and CDR-3 is an amino

acid sequence represented by Sequence ID No. 48 in the Sequence Listing.

8. (previously presented) The device for separating cells according to claim 1, wherein the antibody comprises an amino acid sequence containing a basic amino acid or acidic amino acid added to the C-terminal or N-terminal or both of the amino acid sequence of the antibody.

9. (previously presented) The device for separating cells according to claim 1, wherein the antibody selected from a chimera antibody, a single chain antibody or combinations thereof is bound to an active group of a polypropylene nonwoven fabric reacted with a haloacetaminomethylating agent.

10. (original) A method for separating or detecting cells, comprising using an antibody selected from a chimera antibody, a single chain antibody or combinations thereof.

11. (currently amended) A method for separating or detecting human CD4-positive cells, ~~comprising~~ using an antibody selected from the group consisting of a chimera antibody, a single chain antibody, and combinations thereof, wherein said antibody is bound to a water-insoluble carrier in the form of fiber directly or indirectly, comprising:

contacting a cell suspension comprising CD4-positive
cells with said water-insoluble carrier,
separating said cell suspension and said carrier, and

obtaining said water-insoluble carrier which is bound
to CD4-positive cells on said cell surface

~~selected from a chimera antibody, a single chain~~
~~antibody which bind to CD 4 molecules or molecules, or~~
~~combinations thereof.~~

12. (currently amended) A method for separating or detecting human CD4-positive cells, comprising using a chimera antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 1 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID NO. 2 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 3 in the Sequence Listing, an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 4 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 5 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 6 in the Sequence Listing, and an Fc region of a human type, comprising:

contacting a cell suspension comprising CD4-positive
cells with said water-insoluble carrier,

separating said cell suspension and said carrier, and

obtaining said water-insoluble carrier which is bound
to CD4-positive cells on said cell surface.

13. (currently amended) A method for separating or detecting human CD4-positive cells, comprising using a single chain antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 1 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID NO. 2 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 3 in the Sequence Listing, and an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 4 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 5 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 6 in the Sequence Listing, comprising:

contacting a cell suspension comprising CD4-positive cells with said water-insoluble carrier,
separating said cell suspension and said carrier, and
obtaining said water-insoluble carrier which is bound to CD4-positive cells on said cell surface.

14. (original) A method for separating or detecting human CD34-positive cells, comprising using an antibody selected from a chimera antibody, a single chain antibody which bind to CD34 molecules or combinations thereof.

15. (previously presented) A method for separating or detecting human CD34-positive cells, comprising using a chimera

antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 43 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 44 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 45 in the Sequence Listing, an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 46 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 47 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 48 in the Sequence Listing, and an Fc region of a human type.

16. (original) A method for separating or detecting human CD34-positive cells, comprising using a chain strand antibody, wherein the antibody comprises an H chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 43 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 44 in the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 45 in the Sequence Listing, and an L chain variable region of which CDR-1 is an amino acid sequence represented by Sequence ID No. 46 in the Sequence Listing, CDR-2 is an amino acid sequence represented by Sequence ID No. 47 in

the Sequence Listing, and CDR-3 is an amino acid sequence represented by Sequence ID No. 48 in the Sequence Listing.

17. (previously presented) The method for separating or detecting cells according to claim 10, wherein the antibody comprises an amino acid sequence containing a basic amino acid or acidic amino acid added to the C-terminal or N-terminal or both of the amino acid sequence of the antibody.

18. (original) An antibody comprising an H chain variable region of which CDR-1, CDR-2, and CDR-3 are amino acid sequences described in Sequence ID Nos. 1, 2, and 3, respectively, in the Sequence Listing and having affinity for CD4 antigen.

19. (original) An antibody comprising an L chain variable region of which CDR-1, CDR-2, and CDR-3 are amino acid sequences described in Sequence ID Nos. 4, 5, and 6, respectively, in the Sequence Listing and having affinity for CD4 antigen.

20. (original) A monoclonal antibody to CD4 antigen, produced by hybridoma 4H5 having a depository accession number FERM BP-6729.

21. (previously presented) A nucleic acid encoding the antibody according to claim 18.

22. (original) The nucleic acid according to claim 21, containing the nucleotide sequences described in Sequence ID Nos. 7 and 8.

23. (previously presented) A method for producing antibodies using the nucleic acid according to claim 21.

24. (original) A recombinant antibody which can be obtained by the method according to claim 23 and which has affinity for CD4 antigen.

25. (original) The recombinant antibody according to claim 24, wherein the antibody has an Fc region of a human type.

26. (original) The recombinant antibody according to claim 24, wherein the antibody is a single chain antibody.

27. (previously presented) A medicinal composition comprising the antibody according to claim 18 and a pharmaceutically acceptable carrier.

28. (previously presented) A medicinal composition comprising the recombinant antibody according to claim 24 and a pharmaceutically acceptable carrier.

29. (previously presented) The device for separating cells according to claim 2, wherein the antibody comprises an amino acid sequence containing a basic amino acid or acidic amino acid added to the C-terminal or N-terminal or both of the amino acid sequence of the antibody.

30. (currently amended) The device for separating cells according to claim 2, wherein the antibody selected from the group consisting of a chimera antibody, a single chain antibody, ~~or~~ and combinations thereof is bound to an active group of a polypropylene nonwoven fabric reacted with a haloacetaminomethylating agent.

31. (previously presented) The device for separating cells according to claim 3, wherein the antibody comprises an amino acid sequence containing a basic amino acid or acidic amino acid added to the C-terminal or N-terminal or both of the amino acid sequence of the antibody.

32. (currently amended) The device for separating cells according to claim 3, wherein the antibody ~~selected from a chimera antibody, a single chain antibody or combinations thereof~~ is bound to an active group of a polypropylene nonwoven fabric reacted with a haloacetaminomethylating agent.

33. (previously presented) The device for separating cells according to claim 4, wherein the antibody comprises an amino acid sequence containing a basic amino acid or acidic amino acid added to the C-terminal or N-terminal or both of the amino acid sequence of the antibody.

34. (currently amended) The device for separating cells according to claim 4, wherein the antibody ~~selected from a chimera antibody, a single chain antibody or combinations thereof~~

is bound to an active group of a polypropylene nonwoven fabric
reacted with a haloacetaminomethylating agent.